

<b>Section 3.0 Food Protection</b>	Page 1 of 5
Subsection 3. 13b Collection, Transportation, and Handling of Samples for Laboratory Analysis	Revised May 2008

## **Food Samples for Laboratory Analysis**

Samples of food product will be analyzed and evaluated for microbiological and chemical contamination by the DHSS laboratories. All samples must be submitted as an official sample.

An official sample shall mean a sample specimen, which is collected by DHSS or LPHA staff, handled, transported and analyzed by DHSS or LPHA staff, with the results of such analyses becoming a permanent record of the Section for Disease Control and Environmental Epidemiology (DCEE) demonstrating compliance or noncompliance with DHSS laws and regulations.

### **Duties of BERL Staff**

1. Receive laboratory reports.
2. Establish product standards.
3. Provide consultant and technical services, as needed.
4. Assist in the interpretation of results obtained from analyses performed by branch laboratories.
5. Collect and deliver samples to be analyzed by DHSS laboratories

### **Duties of State Public Health Laboratory (SPHL)**

1. Receive, handle and store samples in a manner that ensures their integrity and security.
2. Report results in a timely manner and in accordance with the established analytical methodologies used.
3. Provide technical advice and assistance regarding:
  - A. Sample or specimen collection and transport;
  - B. The need for testing or the proposed use of test results;
  - C. The appropriate use of tests and analyses;
  - D. The methods of analysis; and
  - E. The laboratory report.

### **Common Responsibilities of Local Public Health Agency**

1. Collect and deliver samples to be analyzed by DHSS laboratories.
2. Provide consultant and technical services, as needed.
3. Assist in the interpretation of results obtained from analyses performed by branch laboratories.

### **Criteria for Food Sample Submission to the SPHL**

Consumer complaint samples from the general public will not be accepted. The SPHL will only accept food samples for testing under the following scenarios:

1. In support of a food-borne disease outbreak investigation:
  - Investigation shall be coordinated by DHSS, Section for Disease Control and Environmental Epidemiology.

<b>Section 3.0 Food Protection</b>	Page 2 of 5
Subsection 3. 13b Collection, Transportation, and Handling of Samples for Laboratory Analysis	Revised May 2008

- Samples must be collected and submitted by DHSS or LPHA staff. Sample collection and submission shall be coordinated through the Regional Epidemiology Specialist.
  - Samples should be non-compromised, unopened containers that are properly transported and submitted with complete documentation.
  - Clinical samples from the affected consumers should be available for testing.
2. In support of a surveillance or enforcement action resulting from a sanitation inspection performed by DHSS or LPHA staff:
    - Samples must be collected and submitted by DHSS or LPHA staff.
    - Samples should be non-compromised, unopened containers that are properly transported and submitted with complete documentation.
    - Testing for sanitation standards only (plate count, yeast and mold, coliform).
  3. In support of an investigation of a food-related terrorism activity:
    - Samples must be collected and submitted by the FBI or other designated law enforcement personnel.
    - Investigation shall be coordinated through the DHSS Center for Emergency Response and Terrorism (CERT).
    - Chain of custody forms shall be maintained for all samples.

### **Food Sampling Procedures**

The laboratory will not accept samples or specimens that have been handled or transported in an incorrect manner, are obviously unacceptable for the test requested, or are not accompanied by a proper and completed laboratory request form.

Food and water products will be analyzed in DHSS branch or local public health laboratories when those laboratories are equipped to perform the analysis. More complex analyses will be performed by DHSS laboratory in Jefferson City. The person collecting the sample is responsible for informing the receiving laboratory of intent to deliver a sample. The receiving laboratory is responsible for recording receipt of all samples submitted for analysis, including time and date received and by whom.

The field person who collects or receives a sample to be analyzed shall submit all information necessary for determining the analysis, which includes:

1. A completed DHSS Lab 52-Food & Drug Specimen collection form;
2. A description of the product involved;
3. The reason for collecting or receiving the sample;
4. The disease or illness involved and the name of the attending physician (when applicable);
5. The name and address of the establishment where the sample was purchased or obtained;
6. The date of purchase and, if applicable, the date of opening or use;
7. If a packaged product, the condition of the container and the code on the container;
8. If not in packaged form, a copy of the label under which the product was held and shipped while in possession of DHSS staff;
9. A description of the follow-up necessary or intended; and
10. The signature of the person who collected or received the sample.

<b>Section 3.0 Food Protection</b>	Page 3 of 5
Subsection 3. 13b Collection, Transportation, and Handling of Samples for Laboratory Analysis	Revised May 2008

In most cases, the sample will be the container of the product of concern, e.g. a box of cake mix, a sack of corn meal, a bag of potato chips, etc. This is appropriate during an inspection when a container is suspected to contain adulterated product.

In other cases, there is no container (e.g. a bin of flour), or it is impractical to submit a container (e.g. a 100 lb. sack of flour). In these cases, it is appropriate to collect and submit a portion of the food product in question. Contact the DHSS laboratory to determine the appropriate sample size specimen bottle.

### **Shipment of Food Samples**

Samples may be carried directly to the laboratory, or shipped by state courier or commercial carrier service. Care must be used in packaging and identification of the containers. Styrofoam containers and "cold packs" may be used for samples when refrigeration is necessary. Every effort to transport samples in the shortest period of time should be made. Packing for shipment of samples should be as follows:

1. Secure the sealed food so that portions of the food cannot escape and that moisture cannot enter the bag.
2. Place the sealed food sample in a plastic bag.
3. Fasten a completed laboratory form, in an envelope, to the plastic bag.
  - A. If more than one sample is submitted, use individual bags and identify each sample. Do not put two samples in one bag.
4. Water samples must be submitted in specially prepared bottles supplied by the DHSS laboratory.
  - A. The DHSS laboratory must receive public water samples within thirty- (30) hours of sampling.
  - B. The DHSS laboratory must receive private water samples within forty-eight (48) hours of sampling.
5. Pack the sample(s) and refrigerant in a shipping container. When needed, use newspaper for packing and additional insulation.
6. Official sample(s) that are or may be involved in cases of tampering, adulteration, misbranding or other violations of law:
  - A. A chain of custody form must be completed and accompany the sample(s); and
  - B. A DHSS sample seal must be placed on the sample packaging.
7. Close the container and tape the box shut.
8. Fasten the address and identification sticker securely to the top of the package.

### **Chain of Custody**

For purposes of documentation in cases of possible tampering, adulteration or misbranding, a chain of custody must be maintained to track the possession and handling of sample(s) from collection through reporting. A sample is in someone's "custody" when:

1. It is in one's actual physical possession;
2. It is in one's view, after being in one's actual physical possession;
3. It is in one's actual physical possession and then locked up so that no one can tamper with it; or

<b>Section 3.0 Food Protection</b>	Page 4 of 5
Subsection 3. 13b Collection, Transportation, and Handling of Samples for Laboratory Analysis	Revised May 2008

4. It is kept in a secured area and restricted to authorized personnel only.

Case law has determined that use of a parcel service or common carrier does not break the chain of custody, provided the seal(s) remain intact after delivery of the package.

### **Sample Seals**

Sample containers shall be sealed in one of the following ways:

1. With a bottle, jar or other impervious container with controlled openings, the original container may have a DHSS “OFFICIAL SAMPLE” seal placed over the controlled opening.
2. For containers that are not impervious, e.g. a sack of flour or a whirlpak of ice cream mix:
  - A. The container(s) should be placed inside another container.
  - B. After wrapping or preparing the package to withstand handling, this outer container should be sealed in the following manner:
    - (I) Starting at the top of the package, place an unbroken strip of wrapping tape completely around the package, overlapping the starting point of the tape at the top of the package.
    - (II) Another unbroken strip of tape should be placed ninety degrees to the overlap of the first strip and wrapped completely around the package, overlapping the start of this strip.
    - (III) The DHSS seal is then placed across the overlaps.
3. Sample containers may be placed in a box with the top, bottom and side flaps securely closed and each sealed with a DHSS seal. To avoid damage to the seals during shipment, the bottom and side flaps may have seals placed on the inside of the box.
4. Where it is impossible or impractical to use the self-adhering DHSS “OFFICIAL SAMPLE” seal, such as on, wooden crates, drums and baskets, the numbered, self-locking metal embargo seals may be used.

A sample seal shall only be broken in one of the following ways:

1. The seal should not be broken by anyone other than the receiving laboratory custodian.
2. If a seal must be broken by anyone other than the receiving laboratory custodian:
  - A. The person breaking the seal must sign and date the seal;
  - B. The broken seal must remain with either the package or the chain of custody form to provide continuous history; and
  - C. A new seal must be completed and properly put in place when resealing the package and prior to transfer to the subsequent sample custodian.

### **Payment for Samples**

1. When samples are submitted to the DHSS laboratories originating from a lot of goods under embargo, payments for the samples collected shall be made or offered to the owner.
2. When samples are collected for investigative reasons from lots of product not under embargo, payment for the samples may be offered to the owner.
3. Payment for the samples may be accomplished in two ways:

<b>Section 3.0 Food Protection</b>	Page 5 of 5
Subsection 3. 13b Collection, Transportation, and Handling of Samples for Laboratory Analysis	Revised May 2008

- A. If payment for the sample(s) collected is equal to or less than \$10 the person collecting the sample shall request reimbursement on the DH-57, Monthly Expense Report. The person should get a receipt from the business that clearly identifies the name and address of the establishment, the kind of sample, and the amount paid.
- B. If payment for the sample(s) collected exceeds \$10 the owner can bill DHSS directly. The bill shall be submitted on business letterhead (if they have letterhead), billed to the Missouri Department of Health & Senior Services, Attn: Chief, Bureau of Environmental Epidemiology, P.O. Box 570, Jefferson City, MO, and include the following information: Remit to name; Address; Phone number; Federal tax I.D. number; Type of merchandise purchased; Cost of merchandise; Date of purchase; and Signed by the business representative.

LPHA staff should arrange for purchase from a local fund. When this is not possible, purchase of samples should be arranged through the Chief, Bureau of Environmental Epidemiology.

### **Disposal of Spent Sample Contents**

Laboratory analysis often results in excess quantities of sample contents. The remaining contents, if not retained for support reasons, should be disposed of properly. The laboratory shall determine the acceptable method for disposal of the spent sample. In no instance may anyone use the contents for personal use and/or gain or give the contents to anyone else for this purpose.

### **CONTACT OFFICES**

State Public Health Laboratory

### **STATUTORY AND/OR REGULATORY AUTHORITY**

Chapter 196 RSMo2000

### **REFERENCE MATERIAL**

Lab 10G- Official Drinking Water Analysis for Total Coliform and *E. coli* Bacteria

Lab 52- Food and Drug Specimen

Lab 65- Chemical Water Analysis

Chain of Custody Form

E6.37C- Food Product Complaint Record